

WHAT IS CLAIMED IS:

1. A shift control system for a hybrid vehicle which has a prime mover, a transmission, a clutch mechanism arranged between the prime mover and the transmission in which its torque capacity is lowered at the shifting time, and an electric motor for assisting a driving torque at the shifting time, further comprising:

an electric power generator for generating an electric power by means of being driven by the prime mover at the shifting time of the transmission; and

an electronic circuit for driving the electric motor in order to assist the driving torque at the shifting time, by means of supplying the electric power generated from the electric power generator at the shifting time of the transmission.

2. A shift control system according to Claim 1, wherein the electric power generator is connected with the prime mover closer than the clutch mechanism.

3. A shift control system according to Claim 1, further comprising:

a controller for controlling the electric power generator in order to absorb the torque generated from the prime mover at the shifting time of the transmission by the electric power generator.

4. A shift control system according to Claim 3,

wherein the controller is constructed to control the torque of the electric power generator so that a torque to be inputted to the transmission from the prime mover through the clutch mechanism becomes zero at the sifting time of the transmission.

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5. A shift control system according to Claim 1, comprising:

a controller for controlling the electric power generator so as to absorb the torque generated from the prime mover at the sifting time of the transmission by the electric power generator, and for
10 controlling the electric motor so as to have the electric motor output the torque in accordance with the torque absorbed by the electric power generator.

6. A shift control system according to Claim 1, further
15 comprising:

a controller for controlling the electric power generator so as to absorb a part of the torque generated from the prime mover at the sifting time of the transmission by the electric power generator, and for controlling an output torque of the prime mover so that the
20 torque exceeding that to be absorbed by the electric power generator becomes zero.

7. A shift control system according to Claim 1, further comprising:

25 a controller for controlling the electric power generator so as to absorb a part of the torque generated from the prime mover at

the sifting time of the transmission by the electric power generator, for controlling the output torque of the prime mover so that another part of the torque generated from the prime mover becomes zero, and for controlling the output torque of the electric motor in
5 accordance with the torque absorbed by the electric power generator and the output torque of the prime mover.

8. A shift control system according to Claim 1,
wherein the transmission comprises, a plurality of gear pairs,
10 and a plurality of synchronizing mechanisms for engaging those gear pairs with an input shaft and an output shaft selectively.

9. A shift control system according to Claim 1, further comprising:
15 a decision means for deciding that it is possible to absorb the entire torque outputted from the prime mover by the electric power generator at the sifting time of the transmission, and

a torque maintaining means for maintaining the output torque of the prime mover as the torque before a commencement of
20 a gear shift, when the decision means decides that it is possible to absorb the entire torque outputted from the prime mover by the electric power generator at the sifting time of the transmission.

10. A shift control system according to Claim 1, further
25 comprising:

a decision means for deciding that it is possible to absorb the

entire torque outputted from the prime mover by the electric power generator at the sifting time of the transmission, and

a torque controlling means for controlling the output torque of the prime mover so that the torque exceeding that possible to be
5 absorbed by the electric power generator gradually becomes zero, when the decision means decides that it is not possible to absorb the entire torque outputted from the prime mover by the electric power generator at the sifting time of the transmission.